CONTROL OF URBAN EXPANSION:
THE LINCOLN, NEBRASKA EXPERIENCE

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Planner's Notebook

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settled society where one unit of density equals one unit of intensity; we are reducing density while increasing intensity. Ours is a space-using, time-saving technology having larger units and lower densities, higher intensity and therefore requiring higher discipline. The problem is one of organizing time rather than space." Doxiadis questioned whether it is an either/or matter; to which Lasuen responded that if one cannot plan time—that is, manage society—the only solution is to plan space so as to plan time through the use of space. Llewelyn-Davies replied by returning to the long-term trends uncovered by the Athens statisticians: the need to observe the past and to project trends into the future is essential, as it is to remember that all discovered trends are not necessarily "natural." Nor are they the results of free choice, but arise from many ancient decision-making processes. "We must disentangle the elements of free choice from social interventions in the process of urban growth."

From this springboard the Delians moved into regional planning with papers by Ward, Mason, Mead and Perlloff, Haar, and Doxiadis. Ward deplored the world-wide tendency to overload the central city with functions so that commuting becomes "density and intensity at their worst." And in the suburbs, low density and the lack of intensity in human intercourse becomes a social problem.

Doxiadis reported on a survey of land in the Detroit region "bought for urban purposes," which indicated that "Detroit" really extends 110 miles to the west, at which point it runs into a similar region of influence extending eastward from Chicago. With such an urban region, is it not almost impossible to predict specific growth directions because "every interest can make unilateral decisions"—railroad, factory, highway, and utility developers being the major direction-givers? Doxiadis argued that there is no "natural growth" except in response to such major forces as these. And it would follow that there is no governmental power able to control such flow, especially in the one direction in which Doxiadis foresees in an ideal city-growth form called "dynapolis." This is a concept for directing urban growth in one direction, so that the old center survives without excess demolitions to accommodate new central-city functions. It has been much publicized by the Doxiadis organization, which has put it into practice with plans for Islamabad, the new capital city of Pakistan, but making it work in an existing U.S. city is another matter.

At this point, the discussion broadened into regional affairs and rather than summarize, I should prefer to concentrate on a new dimension arising from the Perlloff-Mead paper on regional development. Perlloff classified cities as "predator" or "developmental," and observed that Boston was a classic "developmental" city since it furnished settlers, capital, and developmental thrust to many western states; whereas Rio de Janeiro is a classic predator or exploitive city, treating its hinterland chiefly as a supplier of raw materials. The problem on a world-wide basis is to convert predator cities into developmental centers; to encourage urbanism as a part of a national development plan.

But Lasuen foresaw a long period of arguments before most national governments are willing to accept urban development-with-housing as something vital to expanding a nation's productivity. Too many officials still look on housing as a consumer item rather than an element of productivity. Lasuen also moved the predator-development concept a step further. "Region" is an operational concept; one describes a region in terms of what he wishes to correct or to achieve. "If you are successful the region disappears," as the South is disappearing as America's Economic Problem Number 1, since many of its onetime problems (the minority Negro for example) have become nationalized.

Haar saw in this discussion two conflicting themes: "Since we know enough about the good physical life, we must get out and sell it" versus "Let people develop as they will, and then go mop up after them." The test of any society, he thought, is in its dynamism; the law is slow-moving and its role is that of a brake, to give consensus time to operate. "This won't satisfy the Uthwatts of the future, but you must get agreement before the law sanctions what you want to do."

On their final day the Delians adopted a position paper which, if less dramatic than the Delos Declaration of 1963, pursued the same line of concern over the future. In part it said: "Danger signals are appearing all over the globe to warn the world community that it has come to just such a critical threshold as was reached in ancient Greece during the period of the city states. Then, only the transformation of rural, conservative, hierarchical societies into trading, colonizing, urban democracies enabled them to confront the crisis. Mankind as a whole has to think of changes on a comparable scale within the far wider framework of a world community. . . ." They
recommended high priority be given a systematic approach toward world-wide studies of density and regional development. There were discussions of the worldwide rash of regional studies, institutes and conferences; of the encouraging trend in Great Britain toward top-level participation in urban planning, and the creation of a Department of Housing and Urban Affairs in the U.S.A. The Delians reaffirmed the purposes of two earlier symposia—to bring these new priorities into their own work, and into the work of their organizations—and they repeated the earlier pledge from Delos I to do all in their power "to bring the urgency of the crisis in man's habitat before a wider public."

NOTES

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Eldridge H. Lovelace

If planning is to be a constructive influence on the development of cities, surely the predetermination of land to become urbanized in the future is a basic function. The helter-skelter dispersion of the urban pattern over the countryside is a daily mockery of the planner's efforts, not mitigated by mathematical models to "predict" the land use pattern. In truth the community should be designing its own land use pattern.

Many city plans have wrestled with the question, notably the recent Denver and Washington plans, and the literature is full of proposals going back over at least three decades. While many proposals have been made to control and direct the basic pattern of the urban area, very few have been effectively applied.

There are reasons why this most fundamental planning aspect of the urban area seems so neglected in practice. Except for the recent experiments with state-wide zoning in Hawaii, which establishes limits on urbanization, none of our states has attempted to solve this problem on a state level, and most of them have made it difficult, if not
impossible, for the problem to be dealt with at the local level. The area of urbanization for most cities extends far beyond the corporate limits and is divided among several units of local government with those units often least capable of dealing with the problems of new growth—the townships and counties—being given the greatest responsibility for the pattern and character of the newly emerging parts of the urban area. The problem requires a unified approach and a consistent, long-range policy for its solution, otherwise unresolved by multiple responsibility which enables a simple “divide and conquer” approach on the part of the land subdividers and land speculators who are historically adverse to any attempt to control or direct the pattern of urbanization. Tax policies may also foster land speculation and unwise urban growth patterns by placing low assessments on vacant land; by providing no relation between the community plan (and its zoning ordinance) and assessments; and by penalizing worthwhile urban land developments.

When considering urban problems we are more likely to “view with alarm,” than to “point with pride.” There are, however, cities successfully predetermining their urban expansion and preventing urban sprawl. Lincoln, Nebraska is one, and this is an account of its experience.

The Physical Setting

Lincoln was late in initiating community planning activities; the first planning commission was organized in 1948. A city plan was developed in the period 1948 to 1950. In 1960 this plan was reviewed, brought up to date, and extended to include the entire county. The 1960 metropolitan population was 155,000. Growth is fairly rapid. The new regional plan looks forward to a 1980 population of 250,000.

Lincoln is an unusually attractive city. There are relatively few areas of blight, and satisfactory residential amenities are available to virtually all income groups. There are not many who are very rich or very poor. A satisfactory standard of public services and facilities exists, supported by a reasonable local tax level.

The city’s center is a tightly interrelated complex including the State Capitol, the central business district, the University, and a major industrial area (Figure 1). The residential areas have grown outward from this center. Because of the physical (and psychological) difficulties in crossing Salt Creek, however, very little growth has gone to the north and practically none at all to the west, though the city has expanded in all other directions.

So, a fundamental objective of the city’s planning program is to create a better balance in the urban pattern by encouraging a greater amount of growth to the north and west. In these areas the available capacity of existing streets and highways is greater, and there are no major sewer problems. Civic leaders recognize efficiencies and economies that could result from a more balanced growth pattern.

The Comprehensive Regional Plan of 1960 contained detailed proposals for causing a better balance in the population pattern. The land use plan proposed a reasonably complete development of existing areas that had been subdivided and provided with sewer, water, street paving, which would accommodate 175,000 persons. Included were allowances for increases in density in areas adjacent to the central business district. The plan further proposed additional neighborhoods to the north of 8,000 persons; to the west, 12,500; and to the south, 15,000. The remainder of the future regional population of 250,000 would be located in rural areas of the county and in two small satellite cities—one near an atomic power plant south of the city and one on the new interstate highway to Omaha.

In no sense did the plan propose a completely new urban pattern. By and large, the future urban pattern was an extension and a continuation of past trends. The sole exception was the proposal for new neighborhoods to the north and west. Yet, these were proposed to contain less than 10 percent of the future population of 250,000.

But the plan did, in no uncertain manner, call for a halt in growth to the east. This had been the pronounced trend of the postwar, large-scale, single-family mass building, which, in turn, had brought about a regional shopping center about three miles east of the downtown area. This center had so “sopped up” much of the increase in retail trade that it had effectively halted downtown retail expansion. Completion of the interstate highway and new shopping centers in the western part of close-by Omaha had had their competitive effect also. These factors fostered a general belief in the business community that eastern growth was “inevitable.”

In this kind of planning problem the planner may be able to persuade the community that the “line should be drawn,” but he has much more difficulty in convincing it that he has drawn the line in the right place. In the case of the expansion of Lincoln to the east, assistance came from the topography of the site. All of the Lincoln urban area drains into Salt Creek (Figure 2). The city’s sewer system has been so arranged that the existing treatment plant could receive by gravity sewage from several tributaries of Salt Creek, the limits of which permitted development as far east as shown in Figure 2. Thus, this seemed a good boundary line for development.

A large area to the east of the boundary is drained by Stevens Creek, an intermittent stream. The provision of sanitary sewers in this watershed area would require construction of a separate treatment plant or a force main of considerable length. While this imposed no insolvable problem, it was one factor that led to the proposal that the Stevens Creek area not be developed.

In order to make this proposal effective, the planning program included both negative and positive measures. Under Nebraska law, Lincoln has extraterritorial zoning powers, which reach out three miles from the corporate limits. By an aggressive annexation policy and a sound policy limiting extension of water service to the corporate area, Lincoln has been able to keep virtually all urban development within the city limits. In all, the city has rather full control over its area of urbanization. Finally, Lancaster County, which surrounds the city, is zoned and while the zoning is obsolete, a new ordinance coordinated with that of the city is under consideration, and the present regulations are sufficient to prevent “leap-frogging” over the three mile area.

Thus, the city was in a position to effectuate this plan for growth. Areas beyond the proposed urbanization
limit were placed in a "rural and public use district." A minimum lot area of one acre was required, as experience had indicated that this would prohibit all urbanization. Should this prove not to be the case, the minimum lot area could be raised. It is most important to note that the minimum lot area requirement was designed to prohibit all urban residential development and not to bring about residential areas on one acre lots. It has been effective in accomplishing this purpose primarily because of the difficulty and expense of water supply and sewage disposal on individual lots.

As positive measures, the plan proposed basing all public improvements on this land use pattern and urged that the municipality provide utilities, and otherwise do all in its power to promote growth to the north, west, and south. It was recognized that both types of measures would be needed to achieve the objectives of the land use plan.

**The Governmental Setting**

The physical setting and the comprehensive plan must be viewed in the light of extensive changes that had been made in the organization of local government in the Lincoln area. The first of these came in March of 1959 when a joint city-county planning agency was established.

In 1956 the Mayor of Lincoln had appointed a Charter Committee which proposed some 33 amendments to the City Charter. The City of Lincoln at the time operated under a charter which was essentially a weak mayor-council form of city government with the city administrative staff organized under three department heads: Parks, Public Property, and Improvements; Public Welfare and Safety; and Accounts and Finance. The Charter amendments also proposed the establishment of a Department of City Planning on the same level as the other municipal departments. This amendment called for preparation and adoption of an official plan and for mandatory referrals. It gave the planning director wide powers in making recommendations to the Council and in reviewing all municipal proposals and their relationship to the comprehensive plan and its objectives.

The amendments were submitted to the electorate; 32 of the 33 were approved in March of 1959. The Charter amendments integrated planning into the municipal administrative machinery and publicly recognized planning as one of the major municipal functions and responsibilities, thus greatly enhancing its stature. The Charter Commission recommended a strong mayor form of government, but this amendment did not carry; consequently, the amendments did not solve the basic problems of effective city policy and administrative leadership. But in 1962 the voters finally passed a "strong mayor" amendment and in 1963 the first man to hold that office was elected.

Working out the problem of Lincoln’s control of the pattern of urbanization or the prevention of "urban sprawl" was assisted by the intelligent and realistic views of many of the area’s rural residents. Because rural school districts in the environs of Lincoln have an assessed valuation per pupil approximately twice as high as does the Lincoln School District and because the rural districts consist of prosperous farming land which will continue to be prosperous only so long as the area does not have to finance urban problems, most of the rural residents of the county wanted to prevent as well as control the expansion of urbanization. The Lincoln area did not, therefore, have the pressure for land speculation found elsewhere, and public support for joint city-county planning efforts and for zoning to control the location of urban development has thus been readily forthcoming.

**The Issue—The Stevens Creek Matter**

While various planning studies were being made and the changes in the basic governmental powers and organizations were taking place, Lincoln continued to grow to the east, to the south, and to the northeast. Endeavors to encourage greater growth to the north had limited success. The north area (called "Belmont") contained middle-to-low income housing of generally unsatisfactory standards and new growth was encouraged there. However, little progress was made in fostering growth to the west of Salt Creek. The city failed to provide utilities and to expedite subdivision and development of areas to the north, west, and south. Growth to the east and to the northeast continued unabated until 1963, when development ran up against the watershed line of the areas draining into Stevens Creek.

In October of 1963, a large developer petitioned the city for zoning changes covering approximately 110 acres of land within the Stevens Creek area, to take it out of the Rural and Public Use District to a Single-Family Residence District. The fat was now in the fire.

In Lincoln, the planning director must report in writing to the Planning Commission on zoning changes. The Planning Director, Douglas Brogden, recommended denial of the petition. He recited in his report the proposals of the City Plan for bringing about a balanced pattern of urban development in the city, making the point that the 110 acres could not alone be considered. The questions were whether the Stevens Creek watershed as an entity was to be urbanized and whether a different and more unbalanced overall land use pattern was to be chosen. Brogden said that if this one petition were approved it would not be unreasonable to assume that within ten years two square miles of land would be developed within the Stevens Creek watershed, containing some 3,400 dwelling units. Further, that three aspects of city development would be affected substantially: the major street system, the central business district, and the sewer system.

Extending his residential density estimate, Brogden suggested that between 1,400 and 2,000 peak hour traffic movements would occur, requiring a more extensive development of several of the east-west major streets, and several miles of additional major arteries at about $1 million per mile. The impact of locating 10,000 to 12,000 persons in a site most inconvenient to the central business district, yet well related to the newly developing shopping center was evaluated, and it was found that the shopping center area could not practically be provided with traffic arteries permitting it to serve so great a population. Finally, the outright duplication of sewage facilities necessitated by the development of this land was discussed.

The Planning Commission’s public hearing was attended by the proponents of the project and aroused little public interest. The League of Women Voters appeared in opposition, calling for adherence to the Comprehensive City Plan.

In its report to the City Council the Planning Commis-
sion unanimously recommended approval of the zoning change.

When the current Comprehensive Plan was adopted it was the feeling of the Commission that urbanization to the east into the Stevens Creek watershed should be discouraged as long as possible because of the utilities problem inherent in providing sewerage east of 84th Street. It was hoped that population distribution into the southwest, to the north, and to the west could be encouraged; and some progress has been made in this direction. However, despite the repeated urging of the Planning Commission, with notable exceptions, utilities have not been extended into the areas where it was felt desirable to encourage population growth. The reticence of the city to extend utilities to the north, west, and southwest until in the recent past has been a reflection of a historic attitude that utilities would be made available only after substantial development has occurred in the area. It is hoped that the city now recognized that in its own interest it should lead and encourage population distribution by timing the construction of utilities in areas where growth is desirable from an overall planning standpoint.

The Planning Commission’s report also cited the historic pattern of growth to the east, the fact that it did not believe it was the business of the Planning Commission to “force people to live in areas where they do not wish to live,” and also cited the relation of the area to potential industrial districts. Finally, it referred to the possibility of a scattered and unfortunate development occurring in the Stevens Creek watershed under the current zoning regulations. In approval of the application, the Planning Commission reluctantly turned its back on a major proposal of its own Comprehensive Plan.

Because of the long-range importance of the proposal, the Mayor requested reports from each department head on the question of urbanizing the Stevens Creek watershed before making his report to the City Council. The City Attorney stated his opinion that the City had the power to prevent urbanization of the Stevens Creek watershed if it was in the public interest to do so. The Planning Director’s report reinforced his original position, adding that “currently in our Capital Improvement Program we are preparing to extend or are extending water and sewer to the north, west, and south. These studies of the Comprehensive Plan reveal that there is ample room for urban expansion in these three directions for the growth that is proposed to occur in Stevens Creek. Therefore, duplicate facilities must be made to serve all of the areas.”

The Director of Public Safety stated that the fire stations of the city had been located on the basis of no urban growth in the Stevens Creek watershed and that if this policy were to be changed several fire stations would be found to be mislocated. The program for the location of fire stations would have to be reconsidered. The Director of Health was concerned about the proposal to establish temporary sewage treatment plants in the Stevens Creek watershed, citing that the flow in the creek was inadequate for satisfactory dilution. The Director of Public Works cited the overall costs of providing sewers in the watershed. The Traffic Engineer outlined the difficulty in providing adequate traffic capacity from the business district to this portion of the urban area, in comparison with the available traffic capacity already provided to serve other portions of the urban area.

The issue was presented to the City Council in a very clear-cut manner on November 23, 1963. The Council unanimously refused the change of zone. A motion was made a week later to reconsider the proposal, but died for lack of a second. The Councilmen knew that they were making a decision about the urban form of their city. They were, of course, swayed in their judgment by the almost unanimous opinions of their department heads in relation to the cost of developing the Stevens Creek area. Their decision, however, was a planning decision based upon planning considerations.

The issue is not settled for all time. There will be continued pressure to subdivide the Stevens Creek watershed and a future council may succumb. On the other
hand, a stable policy for a few years may result in new growth trends in other directions.

Lessons Learned

Lincoln's decision is one of the few recorded instances of a local decision based upon so important a question as the basic pattern of the city. The question had been brought from the theoretical into the real; the issue was posed and was answered. The experience in Lincoln demonstrates that zoning is a valuable tool to guide and determine the basic urban pattern of a city. While zoning alone may not be completely satisfactory unless coupled with other planning powers, particularly the power to schedule public improvements; nevertheless, if designed, enacted, and administered in accordance with a Comprehensive Land Use Plan, it may almost guarantee bringing about a pre-designed, basic urban pattern. The power to stop urbanization by requiring large lot areas is a power of zoning.

The Lincoln experience demonstrates too the value of a local government's unified control of a nearby unincorporated area. The impact of the entirely local interrelationships among land use, zoning, traffic, sewer costs, and other considerations was heightened.

Control of the basic urban pattern is a fundamental of planning; it is, in fact, the problem that must be solved first. If the areas to be urbanized cannot be predetermined, of what use is it for the planner to worry over such details as where the schools, the parks, or the sewers should go? The experience of Lincoln is valuable as an approach to this basic problem.

Review Article

A REVIEW OF PLANNING BIBLIOGRAPHIES

Caroline Shillaber

The most effective guides to planning literature are bibliographies. In form, they range all the way from the great national bibliographies of various countries to topical lists on special subjects. The national bibliographies are, or aim to be, total listings of all books published during a given span of time. The topical lists are often the result of examining all possible sources and cutting across several seemingly unrelated areas of knowledge.

In the United States, the Cumulative Book Index¹ is the foremost comprehensive trade list of printed books. ("Footnote" numbers refer to a Bibliography at the end of the article.) Published monthly with quarterly and annual cumulations, the CBI, as it is familiarly known, is a current record of all books in print at the time. Entries are made under author, title and subject; the three categories are interfiled in one alphabetic arrangement. Its completeness speaks for the value of CBI to members of every profession. For the most recent books the Publishers' Weekly supplies up-to-the-minute listings from information submitted by publishers all over the country. It is to their advantage to cooperate, as libraries scan Publishers' Weekly regularly for purchases. Other countries have similar directories, found in Winchell's Guide to Reference Books,² where India, South Africa, and the Orient are represented as well as the countries of Europe and Latin America.

United Nations obviously enables it to draw upon reservoirs of knowledge not easily tapped. The bibliography on urban sociology³ is an example of the kind of list prepared by UNESCO. Several bibliographies, notably those on urban land policies and on community facilities, have been appended to the UN Bulletin, Housing, Building and Planning of the Department of Economic and Social Affairs. The annual index and special catalogues covering several years are the best introductory guides to the enormous amount of material emanating from UN, while its Monthly Sales Bulletins furnish data on current publications.

Of an order comparable to the national bibliographies are the catalogues of national libraries printed in book form. Their inclusiveness is apparent from the fact that law universally requires copies of all copyrighted books to be deposited in a national library. The Library of Congress in Washington publishes its holdings from time to time. Each edition consists of many volumes and duplicates exactly information on the catalogue cards. Catalogues of the great foreign libraries, such as the British Museum and Bibliothèque Nationale, have also been printed. The improvement in rapid and economical means of producing card catalogues of libraries in book form, and the development of microfilm techniques, has led to the availability of sources at many locations which formerly had to be consulted where they existed. Now a trip across the country, or to London or Rome may no longer be necessary.

Complete information on many collections of public libraries, special libraries, universities, rare editions, and incunabula has been reproduced in book form or on microfilm. General sources provide the broadest pos-